

CLAIMSWhat is claimed is:

1. A method of preparing an optical brightener/PVOH aqueous concentrate comprising the sequential steps of:
 - a) providing an aqueous brightener composition including water and optical brightener active ingredient;
 - b) admixing a polyvinyl alcohol resin with said aqueous optical brightener composition in an amount of about 1 part of dry polyvinyl alcohol resin per 0.25 to 10 wet parts of aqueous brightener composition to provide a nascent aqueous concentrate of polyvinyl alcohol resin and optical brightener; and
 - c) cooking the aqueous concentrate to dissolve the solids at an elevated temperature for a time sufficient to dissolve substantially all of the polyvinyl alcohol resin so as to provide a cooked brightener/polyvinyl alcohol concentrate including water, polyvinyl alcohol resin, optical brightener, and optionally minor amounts of auxiliaries.
2. The method according to Claim 1, wherein the optical brightener active ingredient is present in the aqueous brightener composition in an amount of from about 10% to about 25%.
3. The method according to Claim 1, wherein the optical brightener active ingredient is present in the aqueous brightener composition in an amount of from about 12% to about 20%.
4. The method according to Claim 1, wherein the optical brightener/PVOH aqueous concentrate has a solids content of from about 20% to about 75% based on the water, polyvinyl alcohol and optical brightener active ingredient content of the concentrate.
5. The method according to Claim 1, wherein said polyvinyl alcohol is admixed with said aqueous optical brightener composition in an amount of from about 15% to about 55% PVOH based on the combined weight of said water, said optical brightener active ingredient and said polyvinyl alcohol resin, the concentrate having a solids content of from about 30 to about 60%.
6. The method according to Claim 1, wherein said aqueous concentrate is cooked to dissolve said solids at a temperature of from about 175°F to about 210°F for a time of from about 10 minutes to about 120 minutes.

7. The method according to Claim 1, wherein said aqueous concentrate is cooked to dissolve said solids at a temperature of from about 185°F to about 205°F for a time of from about 20 minutes to about 60 minutes.

8. The method according to Claim 1, wherein the polyvinyl alcohol resin has a viscosity of from about 2 cps to about 40 cps.

9. The method according to Claim 1, wherein the polyvinyl alcohol resin has a viscosity of from about 2 cps to about 8 cps.

10. The method according to Claim 1, wherein the polyvinyl alcohol resin has a viscosity of from about 3 cps to about 30 cps.

11. The method according to Claim 1, wherein the polyvinyl alcohol resin has a viscosity of from about 3 cps to about 8 cps.

12. The method according to Claim 1, wherein the polyvinyl alcohol resin has a viscosity of from about 3 cps to about 7 cps.

13. The method according to Claim 1, wherein the polyvinyl alcohol resin is hydrolyzed on a mole percent basis of from about 80 to about 99.5 percent.

14. The method according to Claim 1, wherein the polyvinyl alcohol resin is hydrolyzed on a mole percent basis of from about 85 percent to about 90 percent.

15. The method according to Claim 1, wherein the polyvinyl alcohol resin has a degree of polymerization of from about 50 to about 2000.

16. The method according to Claim 1, wherein the polyvinyl alcohol resin has a degree of polymerization of from about 50 to about 300.

17. The method according to Claim 1, wherein the polyvinyl alcohol resin is added to the aqueous brightener composition in substantially dry form.

18. The method according to Claim 1, further comprising the step of diluting the aqueous concentrate.

19. The method according to Claim 1, further comprising the step of adding polyethylene glycol to said aqueous brightener composition or to said nascent or cooked aqueous concentrate.

20. The method according to Claim 19, wherein said polyethylene glycol is added to said aqueous brightener composition or to said nascent or cooked aqueous concentrate in an amount of from about 0.5 to about 2 parts by weight per dry part of polyvinyl alcohol resin.

21. The method according to Claim 1, wherein the optical brightener/PVOH concentrate includes a minor amount of at least one auxiliary selected from dispersing agents,

productive colloids, solvents for the colloids, antifreeze, sequestering agents, binder, plasticizer, filler and water retention aids.

22. The method according to Claim 1, further comprising the step of applying the optical brightener/PVOH concentrate directly to a paper substrate.

23. A method of preparing a color coat composition comprising the sequential steps of:

- (a) providing an aqueous brightener composition including water and optical brightener active ingredient;
- (b) admixing a polyvinyl alcohol resin with said aqueous optical brightener composition in an amount of about 1 part of dry polyvinyl alcohol resin per 0.5 to 10 wet parts of aqueous brightener composition to provide a nascent aqueous concentrate of polyvinyl alcohol resin and optical brightener;
- (c) cooking the aqueous concentrate to dissolve the solids at an elevated temperature for a time sufficient to dissolve substantially all of the polyvinyl alcohol resin so as to provide a cooked brightener/polyvinyl alcohol concentrate of water, polyvinyl alcohol resin and optical brightener, and optionally minor amounts of auxiliaries; and
- (d) admixing the cooked concentrate with an aqueous dispersion comprising color pigment and a binder resin to produce the color coat composition.

24. The method according to Claim 23, further comprising the step of applying said color coat to paper.

25. The method according to Claim 23, wherein the polyvinyl alcohol resin is added to the optical brightener composition in substantially dry form.

26. An optical brightener aqueous concentrate consisting essentially of water, an optical brightener active ingredient and a polyvinyl alcohol resin having a viscosity of from about 2 cps to about 4 cps, wherein the aqueous concentrate is from about 20 to about 75% solids, and wherein the polyvinyl alcohol resin is hydrolyzed from about 80 to about 90 percent on a molar basis.

27. The optical brightener concentrate according to Claim 26, wherein the polyvinyl alcohol resin has a viscosity of from 3 cps to 4 cps.

28. The optical brightener concentrate according to Claim 26, wherein the aqueous concentrate is from about 25 to about 65 percent solids.

29. The optical brightener concentrate according to Claim 26, further comprising polyethylene glycol.

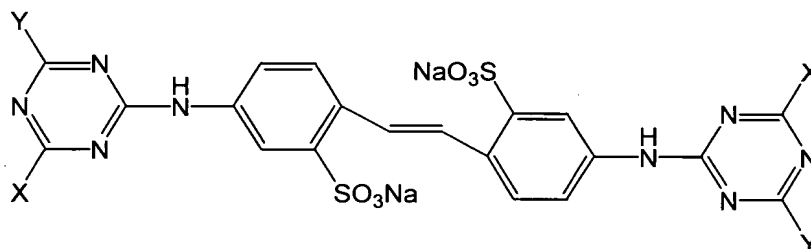
30. The optical brightener concentrate according to Claim 26 wherein the optical brightener active ingredient comprises a stilbene compound.

31. The optical brightener concentrate according to Claim 30, wherein the stilbene compound is a sulfonated stilbene compound.

32. The optical brightener concentrate according to Claim 31, wherein the sulfonated stilbene compound is a tetrasulfonated stilbene compound.

33. The optical brightener concentrate according to Claim 31, wherein the sulfonated stilbene compound is a hexasulfonated stilbene compound.

34. The optical brightener concentrate according to Claim 26, wherein the optical brightener active ingredient comprises a stilbene compound of the formula:



wherein X and Y are independently selected from the moieties indicated below:

	Disulfo	Tetrasulfo 1	Tetrasulfo 2	Hexsulfo
X				
Y				

35. An optical brightener aqueous concentrate consisting essentially of water, an optical brightener active ingredient, polyethylene glycol and a polyvinyl alcohol resin having a viscosity of from about 3 cps to about 4 cps, wherein the aqueous concentrate is from about 20 to about 75% solids, and wherein the polyvinyl alcohol resin is hydrolyzed from about 80 to about 90 percent on a molar basis.